

IN THE SPECIFICATION

Please replace the paragraph comprising the ***ABSTRACT*** on page 26, with the following paragraph:

A method for inferring the shape and dimension of arrays for high-level, array-based languages such as MATLAB is presented. The process is based on a framework that algebraically describes the shape of an expression at compile-time. The method uses the algebraic properties that underlie MATLAB's shape semantics and captures the shape that the expression assumes at runtime. This general and uniform approach provides power shape related assertions and optimizations by further analyzing the use of the arrays throughout the MATLAB design.

IN THE DRAWINGS

Please replace sheet 1, Figs. 1 and 2 with the attached replacement sheet, Figs. 1 and 2.